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17. ABSTRACT (MAX. 250 WORDS) The focus is on personality traits of young children who achieve in school despite environmental handicaps.

The subjects were ten "good" and ten "poor" achievers from the fourth grade in a school located in a severely depressed urban area. The children were chosen on the basis of achievement scores and teacher recommendations. Although all scored at least average on the Otis tests, the poor and good achievers were not matched on I.Q. A battery of eight additional instruments was used to measure many cognitive and affective factors. They were administered both individually and in the classroom by two psychologists. Included were: 1) the WISC sub-tests to measure specific cognitive factors; 2) the Rorschach to measure personality factors; 3) the Use of Objects Test to measure divergent thinking; 4) the Object Sorting Task which measures the ability to see relationships and to generalize; 5) a Story Telling Task to measure the need for achievement and other factors; 6) the Drawing Completion Task to measure creativity and originality; 7) the Semantic Differential to measure attitudes toward school and non-school factors; and 8) Free Drawings to reveal attitudes toward school, teacher and self in relation to family.

The findings indicate that, although a good achiever from an underprivileged environment is relatively controlled and cautious, often stereotyped and constricted, he still retains a degree of creativity. He is more willing to conform to adult demands, has a more positive view of authority figures and greater self confidence. He is superior in analytical and organizational ability. He excels in tasks requiring memory, attention, and verbal abilities. The poor achiever is burdened by anxiety, fear, and a lack of self confidence. He is impulsive and expresses his anxiety in excessive talking.

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Mulligan

Characteristics of Successful School Achievers

From a Severely Deprived Environment

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and
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The School of Education
The City College

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Introduction

In the complex process of education for maximum human effectiveness, the education of children from economically and culturally deprived homes poses certain problems and challenges. Lower-class children, as a group, fall below middle-class children in academic attainment. However, some children from impoverished environments do achieve in school. What are the characteristics of this group? Would knowledge of their traits provide clues for planning more effective educational experiences? The present investigation is concerned with ascertaining some of the cognitive and affective traits which characterize successful school achievers from an underprivileged environment.

Past research on school achievement has dealt chiefly with underachievement in children from middle-class homes at the upper school levels (7,8,13), often relating underachievement to "problem" situations in the family and school environments. In recent years, there has been an increased interest in the achievement of lower-class children. A number of programs have been developed to provide enriched cultural experiences (9, 19); to identify able children during the early school years (14. 19); and to develop more suitable teaching materials (9, 16). Some beginnings have also been made in investigating fundamental personality variables which may underlie achievement in both middle-class children (3, 12) and those from lower-class environments (2, 18); the present study hopes to further this line of inquiry. Here the focus is upon the personality traits of young children who are achieving in school despite environmental handicaps.

Procedure

Selection of Subjects

Twenty children, ten "good" and ten "poor" school achievers, were selected from five fourth grade classes in one school located in a severely depressed urban area. They were Negro children, approximately nine years of age, with five boys and five girls in each sub-group.

The subjects were selected chiefly on the basis of third grade standardized achievement test scores. These included the Metropolitan Primary Reading, the Metropolitan Primary Arithmetic, and the New York Arithmetic tests which had been administered toward the end of the third grade. The achievement test results, as well as the Otis Quick Scoring IQ scores, were available from the record cards for 130 children who were, at the time of this study, in the fourth grade. In addition, the fourth grade teachers were asked to rate the children in their classes in reading, arithmetic, and spelling using a three-point scale; they were also asked to check the five highest achievers and the five lowest achievers.

Two achievement measures were obtained for each child, one the average of the available standardized test scores, and the other, the teacher's total rating score. The children were then ranked within each class and the following criteria set for the selection of the two sub-groups:

Good achievers - grade level of 3.60 or higher on average of achievement test scores[1]; teacher's rating in top third of scale

Poor achievers - grade level of 2.80 or lower on average of achievement test scores; teacher's rating in bottom third of scale

When there was a discrepancy between the teacher rating and the average achievement test score, the test score was given preference, except that no child with a low teacher rating was selected as a good achiever, and no child with a high teacher rating was put into the poor group, regardless of how poorly he performed on the achievement tests.

In the group finally selected, the mean of the achievement test scores for the good achievers was 4.03 with a range of 3.60 to 4.80 (S.D. = 0.41); the mean for the poor achievers was 2.45 ranging from 2.00 to 2.80 (S.D. = 0.28). Thus, the good group averaged slightly above the level expected at the end of the third grade while the poor group was more than one year below grade level with no overlap between the two groups. A difference in average achievement of over one year

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[1] Only the scores from the Metropolitan battery could be averaged. The New York Arithmetic test, which gives percentile ratings, was used to corroborate the other test results. One good and one poor achiever had only reading test scores.

at this grade level seems large enough to warrant the assumption that the two groups selected were distinctly different in achievement (Difference between means = 1.58, $t = 9.44$, $p < .001$).

The Otis IQ scores were used only to screen out children at the extreme lower end of the range. For the selected subjects, the Otis IQ's ranged from 87 to 116. It was thus assumed that all the children in the two groups had at least average potential for academic achievement, taking into account the limited and deprived environment from which they came. It should be pointed out that the good and poor achievers were not matched for IQ. The position taken here is that intelligence tests must be considered primarily as achievement tests rather than as measures of some fixed and stable aptitude. Conventional intelligence tests and achievement tests measure similar abilities and are usually highly correlated. Therefore, the finding that the average Otis IQ[1] of the good achievers is higher than that of the poor achievers supports the selection made on the basis of achievement test scores and provides additional evidence that the two groups do actually differ in achievement. It follows, then, that differences in achievement cannot be explained by differences in IQ since what produces differences in the one may be exactly the same condition or combination of conditions which produces differences in the other. In this study we are primarily interested in ascertaining the personality correlates of achievement.

Information on home background factors was obtained from school records and consultation with the guidance counselor. Examination of factors such as type of dwelling, completeness of the family, number of siblings and kindergarten experience revealed no apparent difference between the two sub-groups with respect to the gross background variables considered.

Selection of Assessment Battery

A battery of eight instruments was chosen to assess a broad spectrum of cognitive and affective factors. Both standardized tests and devices adapted or devised specifically for this study were part of the battery. The rationale for the selection of each instrument is briefly outlined below. Any scoring used which was uncommon is also described. Whenever possible, reaction time and

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[1] Otis IQ

	Mean	S.D.
Good Achievers	100.6	6.96
Poor Achievers	92.3	6.06

$t = 2.67$, $p < .05$

(See also WISC results, Table 1)

response time, number of words used in verbal and written statements and the number of "popular" responses, empirically determined, were noted.

Each child was seen at least three times for individual testing, typically first for the administration of the Rorschach, a second time for the WISC sub-tests, and again for the administration of the Story Telling, Object Sorting, Uses of Objects and Drawing Completion tasks. The Semantic Differential and the two Free Drawings were administered in the regular classrooms at two different times, with all the children in the grade participating. Oral directions were used throughout so as not to penalize the poor readers. The battery was administered by two qualified psychologists.[1]

1. The WISC Sub-Tests. The WISC was chosen, not as a maasure of overall intellectual performance, but rather as a measure of specific cognitive factors presumed to affect achievement and assessed by eight of the sub-tests. For example, verbal ability may be ascertained primarily by the Vocabulary, Comprehension and Information sub-tests; memory and attention by the Digit Span and Coding sub-tests; analytical and organizational ability by the Block Design and Picture Arrangement sub-tests; concept formation and ability to generalize by the Similarities sub-test.

2. The Rorschach. The Rorschach was used to measure such factors as cautiousness, control, anxiety, perceptual accuracy, ability to organize, and stereotypy in thinking. In view of the fact that the isolated Rorschach scores have limited meaning, two additional levels of analysis were employed: a) selected patterns of scores used in a previous study of achievement to assess such personality characteristics as ego-strength, originality, and spontaneity (3) and also b) blind clinical appraisal of the total record for evidence of achievement-related variables.

In the clinical appraisal, two clinicians were asked to identify independently the good and poor achievers and then to indicate the evidence they had used for judging.[2] One clinician identified all 10 poor achievers correctly and six of the 10 good achievers correctly. Only the results of this clinician were used in reporting the findings.

3. Uses of Objects. The Uses of Objects test stemmed from a task proposed by Guilford to measure divergent thinking (10, 11) in which he identified

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[1] Mrs. Joan Gerver and Mr. Allan Gerston.

[2] Dr. Florine Katz and Miss Anita Weinreb of The City College served as clinical consultants for the appraisal of the total record.

the variables of "ideational fluency" and "spontaneous flexibility." Ideational fluency is defined as the number of uses named for each object; spontaneous flexibility as the number of different classes or categories into which the uses fall. The task was also used by Guilford as a measure of originality and by Getzels and Jackson as a creativity measure (6).

For the present study, this device was modified in that no time limit was set, and the objects "paper" and "knife" were added to "brick," the one object used by Guilford. "Paper" was included as a school-related word; "knife" for its possible destructive connotation. Information was also obtained concerning the accuracy level and organization of concepts.

4. Object Sorting Task. An Object Sorting test was derived from one described by Gardner (5) who used this technique to ascertain "equivalence range" as determined by both size of groups and reasons given for sorting. Gardner claimed that persons who sorted a given set of objects into many groups (narrow equivalence range) were more impelled to act on their awareness of differences than those who sorted into fewer and therefore larger groups (broad equivalence range). According to Gardner, equivalence range is also identified by reasons given for sorting, with the "broad" group tending to classify by use or other personal experience and the "narrow" group tending to classify by physical property of the object or other impersonal grounds. This categorizing task would seem to be relevant to school tasks that involve ability to see relationships and generalize.

In adapting this task, 44 objects (see Appendix A) were chosen because of their familiarity, physical properties and availability. An additional feature was a forced categories task. After the children had done the initial sorting and given reasons for the groupings, they were asked to put all the objects into two groups only. The purpose of this request was to see whether they would demonstrate adaptive flexibility by being able to shift focus and to reorganize the existing categorization.

5. A Story Telling Task. A Story Telling task was devised using four pictures to elicit stories from the children. One of the pictures was the first TAT card (boy with violin). The other three were school-oriented photographs deemed particularly suitable for this group of children: one of a classroom with Negro children and teacher; one a photograph of a teacher and child at the teacher's desk (racial identity ambiguous); and the last a photograph of a pensive Negro girl sitting on a school chair.

The stories were scored to obtain a measure of the "need for achievement" using McClelland's scoring system (15). Other information gleaned from the stories dealt with the following: level of the story, role of the teacher and parent, presence of reward-punishment themes, type of goal, type of ending, emotional content of the story and quality of language used.

6. Semantic Differential. A Semantic Differential device, based on Osgood's (17) theory and method was set up using simplified three-point rating scales with vocabulary suitable for this age group.[1] Thirteen concepts were chosen to measure attitudes toward school and non-school factors which might be related to achievement in school. These concepts were rated on six evaluative and two potency scales (see Appendix B).

This instrument was administered as a group test to all the children of the grade in their classrooms. Oral instructions were used in order to avoid penalizing the children who read poorly. Mean ratings were obtained for each of the 13 concepts on the two types of scales. In addition, composite scores were obtained for the seven school-oriented concepts and for the six non-school concepts. A measure of "cautiousness" was obtained by counting the number of times each child checked the neutral position of the three-point scale rather than the positive or negative position.

7. The Drawing Completion Task. The Drawing Completion task was based on Barron's (1) use of the Kate Franck Incomplete Drawing Test (4). The subject is presented with a series of simple, ambiguous line patterns and instructed to draw a picture in any way he wishes. This task was used by Barron as a measure of creativity and originality.

In this study, the first twelve items of the Franck test were used (see Appendix C). The drawings were analyzed for content and grouped into three major categories: 1) Representations (Human, Animal, Object); 2) Designs and 3) Symbols (Geometric Forms, Numbers and Letters). Each drawing was scored for three different qualities: for symmetry, for originality, and for complexity. Finally, the artistic merit or "creativity" of each drawing was evaluated as a whole to determine whether in the drawings of this group, the qualities of asymmetry, originality and complexity correlate with overall "creativity" as stated by Barron.

8. Free Drawings. Two drawings were obtained from all the children in the fourth grade in their classrooms. They were requested to draw, "A Child in

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[1] Dr. Jeanne Chall of the City College cooperated in adapting the Semantic Differential for this group.

School" and "My Family". It was felt that the content of these drawings would reveal attitudes toward school, teacher and self in relation to family. The "Child in School" drawing was analyzed for the kind of activity shown to ascertain whether the theme was directly involved with school work or not. For the drawing of "My Family", the child was asked to circle himself and to label the other members of the family. It was thus possible to obtain quantitative measurements of size of self and of parent figures.

9. Additional Miscellaneous Items. From the aforementioned tasks, it was possible to derive some information on five other variables which are undoubtedly important in school achievement:

a). Number of Words Used in Oral and Written Tasks - The number of words the child used in responding to the Rorschach, Story Telling and Uses of Objects was counted to measure oral production. Fluency in written expression was measured by counting the number of words the child used when asked to write "what you want to be when you grow up" and to describe his "Child in School" drawing. (The reverse sides of the drawings were used for writing.)

b). Ability to Follow Directions - The capacity of the child to do what was requested of him was observed throughout the testing sessions. It was specifically noted, however, in the "My Family" drawing when the child was asked to put a circle about himself and then to label the members of the family, and in the Object Sorting task when he was asked to re-sort the objects into two groups only.

c). Curiosity - Some indication of this trait was obtained by incorporating an unknown object[1] in the Object Sorting task. Note was made of whether the child raised a question about it.

d). Level of Occupational Goal - The amount of education which would be required to achieve the occupation the child named in responding to "what you want to be when you grow up" was noted. This should give some indication of the child's level of aspiration.

e). Quality of Language Usage - The quality of the child's written and oral language was evaluated for grammatical construction, level and accuracy of vocabulary and narrative skill. Each of these three characteristics was judged separately on a three-point scale. The scores for the separate qualities were totalled to give each child two scores, one for oral usage and one for written usage.

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[1] This was an unusual type of coin holder which was unfamiliar to all children and adults canvassed in a pre-test.

Hypotheses Suggested by the Data

Since this investigation is considered to be hypothesis-generating rather than hypothesis-testing, the findings are presented in this section in the form of ten propositions which may account for the observed differences in school achievement. These propositions or hypotheses were suggested by many mutually supporting pieces of evidence obtained from the several instruments. In stating the hypotheses certain traits or factors, which theoretically are assumed to be related, were grouped together. For each hypothesis, specific relevant evidence is presented. Although the hypotheses are stated in terms of differences between the good and poor achievers, a number of important similarities between the two groups will be pointed out at the end of this section.

Because of the small number of children in the two groups and the exploratory purpose of the study, this summary includes both differences that were statistically significant and those that were not; therefore the magnitude of the stated differences varies from one hypothesis to another. The reader is urged to refer to the tables given at the end of the report for the detailed findings on each instrument used, along with the statistical tests of significance.[1] (See pages 21-37 for tables.)

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[1] It must also be realized that 5% of the differences tested at the .05 level of confidence would be significant by chance alone.

Hypothesis 1 Good achievers are more controlled, cautious and constricted than poor achievers.

Evidence

This group of good achievers was characterized by the following:

Longer reaction time and response time on the Rorschach (Table 2a); longer reaction time and response time on the Object Sorting task (Table 4c)

Fewer responses on the Rorschach and fewer content categories, with higher A% (Table 2a)

Fewer M and FM and higher F% on the Rorschach (Table 2a)

Less responsive to color but with more FC scores on the Rorschach (Table 2a)

Fewer showed "spontaneity" pattern and "originality" pattern on the Rorschach pattern scores (Table 2b)

More were judged on clinical appraisal of Rorschach record to show "control, caution and constriction" (Table 2c)

Fewer "uses" and fewer "categories" given in Uses of Objects task (Table 3a)

Fewer emotions expressed in Story Telling (Table 5e)

More frequent use of "neutral" position on the Semantic Differential (Table 6c)

Hypothesis 2 Good achievers exhibit greater "need for achievement" and more of them show curiosity or the "need to know"; they are also more work-oriented and less concerned with immediate gratification than poor achievers.

Evidence

This group of good achievers was characterized by the following:

More adult uses given in Uses of Objects task (Table 3c)

Higher "need Achievement" scores in Story Telling task (Table 5b)

Fewer immediate goals incorporated in stories in Story Telling task (Table 5b)

More often incorporated "teacher" in stories told for Story Telling task and more often cast them in instructional role (Table 5c)

Higher evaluative rating for "homework" on Semantic Differential[1] (Table 6a)

More school-oriented content (numbers and letters) in Drawing Completion task (Table 7a)

More drew children engaged in school work in "Child in School" drawing (Table 8b)

More showed curiosity about an unknown object (Table 9c)

More chose occupational goals that require at least high school education (Table 9d)

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[1] "Homework" was the only one of the 13 concepts on the Semantic Differential which the good group rated higher on the evaluative scales than the poor group did. (There would seem to be some contradiction to the above hypothesis in the fact that the good group gave lower ratings to all other school concepts such as "reading" and "arithmetic". Other data from the Semantic Differential also seem at variance with Hypotheses 3 and 5, while providing some substantiation for Hypothesis 7. At present an expanded study of the Semantic Differential instrument is in progress using the entire fourth grade.)

Hypothesis 3 Good achievers have a more positive attitude toward authority figures than poor achievers and see the world as less threatening.

Evidence

This group of good achievers was characterized by the following:

Fewer gave destructive uses for "brick" and "knife" in Uses of Objects task (Table 3c)

Gave a larger number of positive and fewer negative story endings in Story Telling task (Table 5b)

Teachers and parents more often cast in positive roles in Story Telling task (Table 5c)

More incidents of rewards recounted in Story Telling task (Table 5d)

Fewer negative emotions expressed in stories told for Story Telling task (Table 5e)

"Mother" and "Father" drawn larger in "My Family" drawing, with size of self and parents relatively closer (Table 8a)

Ratings of self and parents relatively closer on Semantic Differential evaluative scales (Table 6a)

Hypothesis 4 Good achievers are more accepting of adult standards and expectations than poor achievers.

Evidence

This group of good achievers was characterized by the following:

More were judged on clinical appraisal of the Rorschach as tending to "conform and want to please" (Table 2c)

Gave more adult-oriented uses in Uses of Objects task (Table 3c)

More followed instructions in re-sorting categories in Object Sorting and identifying figures in "My Family" drawing (Table 9b)

Hypothesis 5 Good achievers have a more positive self-image and greater self-confidence than poor achievers.

Evidence

This group of good achievers was characterized by the following:

Fewer were judged "lacking self-confidence" in clinical appraisal of Rorschach (Table 2c)[1]

Drew themselves larger in drawing of "My Family" (Table 8a)

More named occupational goals that require at least high school education (Table 9d)

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[1] A contradiction appears in the finding that five good and six poor achievers exhibited the Rorschach pattern of "Ego Strength" (Table 2b). The concept of ego strength and the specific criteria used to measure it may be more reliable in the case of older children and adults.

Hypothesis 6 Good achievers are less anxious and fearful than poor achievers.

Evidence

This group of good achievers was characterized by the following:

Higher scores on Digit Span sub-test of WISC (Table 1)

Fewer Dd+S responses on the Rorschach (Table 2a)

Fewer were judged "anxious and fearful" in the clinical appraisal of the Rorschach (Table 2c)

Fewer gave destructive uses for "brick" and "knife" in Uses of Objects task (Table 3c)

Fewer expressed negative emotions in the stories and fewer gave negative endings in Story Telling task (Tables 5b and 5e)

Less verbose in testing situations which permitted unrestricted oral response (Table 9a)

Hypothesis 7 Good achievers show greater ability than poor achievers to view themselves and the world around them objectively, accurately and critically.

Evidence

This group of good achievers was characterized by the following:

Higher scores in Information sub-test of the WISC (Table 1)

Higher FLR (Form Level Rating) scores on Rorschach indicating greater perceptual accuracy (Table 2a)

Fewer inaccurate original (O-) responses on Rorschach (Table 2a)

More were judged to show "self-critical ability" in clinical appraisal of Rorschach (Table 2c)

More were judged to show "practical, concrete approach" in clinical appraisal of Rorschach (Table 2c)

Higher percentage of "accurate" responses in Uses of Objects task (Table 3c)

Lower evaluative ratings for 12 of 13 concepts on Semantic Differential (Table 6a)

Hypothesis 8 Good achievers are superior to poor achievers in general verbal ability and in quality of verbal behavior; they do not excel, however, in divergent production.

Evidence

This group of good achievers was characterized by the following:

Higher scores on Vocabulary, Information and Comprehension sub-tests of WISC; greater superiority on WISC verbal IQ than on WISC performance IQ (Table 1)

Fewer responses and content categories on Rorschach (Table 2a)

Lower in ideational fluency (fewer uses) and spontaneous flexibility (fewer categories) in Uses of Objects task (Table 3a)

Showed greater facility with written language in describing drawing and stating occupational goal (Table 9a)

Higher quality scores in oral and written language usage (Table 9e)

Hypothesis 9 Good achievers are superior to poor achievers in memory and attention.

Evidence

This group of good achievers was characterized by the following:

Higher scores on Digit Span and Coding sub-tests of WISC; also on other sub-tests that have memory component (Table 1)

More followed directions in "My Family" Drawing and Object Sorting re-classification (Table 9b)

Hypothesis 10 Good achievers show better analyzing, organizing, elaborating and generalizing abilities than poor achievers.

Evidence

This group of good achievers was characterized by the following:

Higher scores on Similarities and Block Design sub-tests on the WISC (Table 1)

Higher W% and FLR scores on Rorschach indicating organizing ability (Table 2a)

More evidenced "abstract ability" pattern on the Rorschach (Table 2b)

Gave more general uses for objects in Uses of Objects and more often demonstrated relatedness in sequence of ideas (Table 3d)

Formed larger groups of objects in Object Sorting task (Table 4a)

More drawings on Drawing Completion task were judged "creative" in that they were asymmetrical, original, and complex (Table 7b)

The ten hypotheses stated on the preceding pages emphasize the dissimilarities between the good and poor achievers in order to provide clues that may help explain the difference in school performance. However, the many similarities which do exist between the two groups must not be overlooked.

Although much individual variability in test behavior was noted by the examiners, there did not seem to be any consistent difference between the good and the poor achievers with respect to such factors as willingness to cooperate, eagerness to do well, relatedness to the examiners and general capacity to cope with the tasks demanded of them.

Certain findings from the battery also point to marked likenesses between the two groups in some aspects of cognitive functioning. For example, almost identical characteristics were revealed in the degree of conventionality evidenced in the "Popular" responses on the Rorschach (Table 2a); in the ratio of uses to categories in Uses of Objects (Table 3a); in the reasons given for Object Sorting (Table 4b); in the level of their stories on the Story Telling task (Table 5a); and in the content of their drawings on the Drawing Completion task (Table 7a). Also, there was little difference between the poor achievers and the good achievers on the WISC Picture Arrangement and Comprehension subtests, both tasks involving an element of social awareness (Table 1). It would seem from the likenesses noted here that there are important resemblances in the thought content and processes and the social orientation of the good and poor achievers.

Summary Statement and Implications

From the findings of this study, the hypothetical good achiever from an underprivileged environment emerges as a child who is relatively controlled and cautious, often stereotyped and constricted, but who still retains a degree of originality and creativity. He seems more willing than his less successful classmates to conform to adult demands, has a more positive view of authority figures and greater self-confidence. In cognitive functioning he excels chiefly in tasks requiring memory, attention and verbal abilities. He is also superior in analytical and organizational abilities and generally in processes that require convergent thinking.

In contrast, the composite picture of the poor achiever is that of a child burdened by anxiety, fearful of the world and authority figures and lacking in self-confidence. He is more apt to be impulsive and labile with relatively poor controlling mechanisms. His defenses against anxiety and feelings of inadequacy may be expressed in excessive talking and in uncritically favorable surface attitudes toward self and others. Nevertheless, the poor achiever still seems to have sufficient potential for adaptive behavior which the school could build upon. His cognitive activities are often quite similar in content, approach, and process to those of the good achiever and in fact, he demonstrates greater facility in divergent production. Many of his reactions give evidence of creative capacity which might be directed and controlled. From his behavior in the testing situations and in tasks requiring social comprehension, the poor achiever seems to possess substantial understanding of the world around him, although he seems less able to act upon this understanding than the good achiever.

The above sketches and the previously stated hypotheses are based upon the variables selected for investigation in this study. These variables, of course, represent only a sampling of many that might have been considered. For example, physical factors were not included. Also, the study did not tap

antecedent conditions such as early intellectual and emotional experiences. It should also be noted that the definition of "achievement" in terms of reading, arithmetic and spelling involves certain limitations as well.

It would perhaps be most fruitful to translate the hypotheses derived, after testing, into terms which would be practical for experimentation in the school situation. Although the primary purpose would be to improve the performance of the young child from a deprived background who is not successful in school, some of the outcomes should lead to better learning for the good achievers as well. It should be remembered that the latter group in this study is only relatively "good" since their performance is merely average in terms of national norms.

Several possible avenues suggest themselves which the school can pursue to overcome deficiencies and to re-direct negative attitudes which seem to have curtailed achievement in some lower-class children.[1] The classroom and teaching situation might be deliberately organized so as to provide initial and continued success for all children. It seems clear, though, that children need not easy successes but learning activities that challenge and stimulate them. It is likely that if children experience early success in school learning and can anticipate continuing success, some desirable affective concomitants would be developed more easily and these in turn should facilitate further learning. One would expect enhanced feelings of self-worth, the generation of more favorable attitudes toward authority figures, greater willingness to accept adult demands and increased motivation for further achievement.

There are indications that the underprivileged child needs a structured classroom environment and considerable help in learning to control his impulses before he can cope with freer learning situations. As another requisite for

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[1] The poor-achieving boys seem to be most severely handicapped and may need special kinds of help.

successful learning,direct and intensive attempts should be made to raise the level of functioning in cognitive characteristics such as memory and attention, as well as in verbal abilities, including listening and speaking. Helping the underprivileged child to raise his expectations for himself should also be an area of specific school concern and effort.

Any school program directed toward testing out or applying these ideas would be contingent upon having appropriate materials, suitably prepared teachers and favorable classroom situations. "Appropriate materials" would seem to be those rich in content which can provide continuous intellectual stimulation and encourage curiosity in children whose early environment has been relatively impoverished. Specific materials and techniques need to be devised to develop those cognitive abilities in which many underprivileged children are particularly deficient. "Suitably prepared teachers" would need to be competent in specific subject matter and capable of providing an exciting intellectual climate; they would need to understand and provide support for the positive qualities of underprivileged children while recognizing their special fears, anxieties and needs. It would also be valuable to have teachers whose "need for achievement" for themselves and their pupils is high. Finally, the most important element in a "favorable classroom situation", at least in the early school grades, would be to provide for classes small enough so that every child could have meaningful personal contact with "good" adults. These and similar procedures may enable the school to help children from deprived environments realize their full potential.

Table 1. Mean WISC Sub-Test Scaled Scores for the Good and the Poor Achievers (Standard deviations are shown in parentheses)

Sub-Tests	Good Achievers (N = 10)	Poor Achievers (N = 10)	t
Information	10.9 (2.08)	7.8 (1.48)	3.83**
Comprehension	10.1 (3.21)	8.8 (2.57)	1.00
Similarities	9.6 (2.59)	7.7 (2.11)	1.79
Vocabulary	9.3 (2.63)	6.4 (1.84)	2.87*
Digit Span	10.9 (1.79)	9.3 (0.95)	2.50*
Picture Arrangement	9.0 (2.79)	8.3 (2.21)	0.63
Block Design	9.1 (1.79)	7.9 (1.79)	1.49
Coding	9.8 (1.93)	8.4 (2.22)	1.51
Estimated IQ Scores			
Verbal	101.0 (9.94)	87.2 (5.62)	3.82**
Performance	95.3 (7.96)	86.9 (8.20)	2.33*
Total	98.1 (8.63)	85.8 (4.96)	4.16**

*Significant at less than the .05 level.

**Significant at less than the .01 level.

Table 2a. Mean Rorschach Scores for The Good and The Poor Achievers

(Standard deviations are shown in parentheses)

Rorschach Scoring Category	Good Achievers (N = 10)	Poor Achievers (N = 10)	t
R (Number of Responses)	14.5 (7.85)	19.4 (5.38)	1.55
Average Reaction Time per Card (in seconds)	20.3" (16.56)	7.6" (10.87)	2.05
Average Time per Response (in seconds)	42.6" (26.45)	30.4" (16.90)	1.24
W%	43.1 (24.35)	36.0 (16.20)	0.73
D%	49.1 (23.43)	49.7 (14.25)	0.07
d%	2.2 (4.63)	3.4 (3.84)	0.39
Dd + S%	5.7 (9.00)	11.0 (6.42)	1.43
F%	63.7 (26.31)	60.2 (22.50)	0.30
M	1.4 (1.50)	2.0 (1.33)	0.09
FM	2.0 (2.11)	3.0 (2.58)	0.90
FK + F + Fc%	64.5 (24.80)	63.1 (23.20)	0.12

FC	0.70 (0.30)	0.60 (0.22)	0.83
CF	0.60 (0.22)	0.80 (0.29)	1.67
Sum C	0.95 (1.12)	1.25 (2.61)	0.32
% R(VIII + IX + X)	29.3 (12.52)	38.0 (7.57)	1.79
A%	65.3 (24.80)	56.7 (12.65)	0.93
H%	16.7 (16.50)	20.4 (13.90)	0.51
Number of Content Categories	3.8 (1.92)	4.9 (1.48)	1.33
P	4.6 (2.06)	4.6 (1.50)	0.00
O	0.70 (1.05)	0.60 (0.84)	0.23
O-	0.70 (0.82)	0.90 (1.10)	0.24
Form-Level Rating (FLR) (A composite rating based on accuracy and organization; scores may range from -2.0 to +5.0)	0.80 (0.43)	0.57 (0.39)	1.21

Table 2b. Number of Good and Poor Achievers Exhibiting Selected Characteristics Based on Rorschach Pattern Scores

Personality Characteristic	Good Achievers (N = 10)	Poor Achievers (N = 10)
Ego Strength (M, 2 or more; F% 20-50; H + Hd, 3 or more; FC: CF + C 2:1)	5[a]	6
Abstract Ability (W:O, 2:1 or better; average Form Level Rating 1.0 or higher)	5	3
Spontaneity (M, 2 or more ΣC 1 or more; F% <60; H+A:Hd+Ad=2:1)	1	2
Originality (M, 2 or more; A% <60; P 3 or less; content categories 4 or more)	6	8

[a]Only children who satisfied at least two of the criteria were included, except in the case of "abstract ability" where only one was "required."

Table 2c. Findings Based Upon Clinical Appraisal of the Rorschach Protocols of the Good and The Poor Achievers

Personality Characteristics Noted ‡	Good Achievers (N = 10)	Poor Achievers (N = 10)
Exhibits control, caution, construction	8	2
Conforms and wants to please	6	2
Shows practical, concrete approach	4	0
Lacks self-confidence; lacks self-critical ability	1	7
Shows serious anxiety, is fearful, conflicted, uncontrolled	2	9

‡ This table summarizes statements from the "blind" clinical appraisal by an experienced clinician who was instructed to identify the good and poor achievers and give substantiating evidence from their Rorschach protocols. The major traits which were noted in a number of records have been included here.

Table 3a. Mean Number of Uses and Categories[‡] Given for Three Objects by the Good and the Poor Achievers

(Standard deviations are shown in parentheses)

Object	Good Achievers (N = 10)			Poor Achievers (N = 10)		
	No. of Uses	No. of Categories	Ratio (Uses to Categories)	No. of Uses	No. of Categories	Ratio (Uses to Categories)
Brick	3.7 (2.36)	2.1 (0.74)	1.8	6.3 (3.95)	2.7 (1.16)	2.3
Paper	6.5 (3.87)	3.7 (1.57)	1.8	7.0 (7.59)	4.4 (1.43)	1.6
Knife	4.5 (3.60)	2.7 (1.16)	1.7	4.7 (2.36)	3.1 (1.10)	1.5
All Three Objects	14.7 [a] (8.63)	8.5 [b] (2.76)	1.7	18.0 [a] (7.89)	10.2 [b] (3.01)	1.7

[‡]See Table 3b for the categories required to group the uses given.

[a]The difference between the mean number of uses given by the good and poor achievers was not significant (t = 0.89).

[b]The difference between the mean number of categories for the good and poor achievers was not significant (t = 1.32).

Table 3b. Categories Developed to Group the Uses Named for Each Object by All Twenty Children

(Categories are listed in order of frequency)

BRICK:

Build a building (house, school)
Build part of a building (floor, door)
Build something
Make a functional object (bridge, barbecue)
Use a single brick
Use destructively

PAPER:

Make something (airplane, paper doll)
Write (words, stories, numbers)
Draw
Special paper (sand paper, tissue paper)
Printed material
Cut
Clean
Wrap
Play
Paste on
Burn

KNIFE:

Cut an object (soap, cake)
Cut something
Carve
Use destructively
Play
As an appropriate tool (scraper, pencil sharpener)
As an inappropriate tool
To eat "with"

Table 3c. Quality of Uses Given by the Good and the Poor Achievers to Uses of Objects Task

Quality	Good Achievers	Poor Achievers
Percent Accurate+ Uses of Total Number Uses	97.3% ($\frac{143}{147}$)[a]	90.0% ($\frac{162}{180}$)
Percent Popular‡ Uses of Total Number Accurate	34.3 ($\frac{49}{143}$)	28.4 ($\frac{46}{162}$)
Percent Adult# Uses of Total Number Accurate	84.6 ($\frac{121}{143}$)	50.0 ($\frac{81}{162}$)
Percent of School Related Uses for "Paper" of Total Number Accurate	40.6 ($\frac{26}{64}$)	39.1 ($\frac{25}{64}$)
Percent Destructive Uses for "Knife" and "Brick" of Total Number Accurate	6.3 (3 children involved) ($\frac{5}{79}$)	5.1 (5 children involved) ($\frac{5}{98}$)

[a] Numbers on which percentages are based are shown in parentheses.

+ Any use which was possible for the object was considered accurate.

‡ A use was considered popular when given by five or more children of the 20 children.

Adult uses included any use which indicated "grown-up" rather than "childish" orientation; e.g., "newspaper" in contrast to "making airplanes" for paper or "build a factory" in contrast to "build a surprise for your friend in your own yard" for brick.

Table 3d. Organization and Flow of Ideas in Responses to Uses of Objects Task for the Good and the Poor Achievers

Method of Organizing Ideas‡	Number and Percent of Ideas	
	Good Achievers	Poor Achievers
1. General Uses Given Chiefly (e.g., "building things" for Brick; "write" for Paper)	10 (33.3%)	4 (13.3%)
2. Specific Uses Given Chiefly (e.g., "build" floor" for Brick; "do number work" for Paper)	1	3
3. General Uses Given First, followed by Specific Uses	15 (50.0%)	21 (70.0%)
(a) Specific Related to General	10 (66.7%)	7 (33.3%)
(b) Specific Not Related to General	5	14
4. Specific Uses First, followed by General Uses	4	2
(a) General Related to Specific	1	0
(b) General Not Related to Specific	3	2

‡For each object, the child's uses were classified into the four major patterns listed. Since there were three objects and ten children in each group, the total possible number of responses was 30.

Table 4a. Number of Groups of Different Sizes Formed by the Good and the Poor Achievers in the Object Sorting Task

Size of Group Formed	Number of Groups of Different Sizes	
	Good Achievers	Poor Achievers
5 - 10 Objects	26 (9)[a]	18 (7)
3 - 4 Objects	34 (10)	36 (10)
2 Objects	59 (10)	78 (9)
1 Object or Unsorted	52 (7)	54 (9)
Total	171	186

[a]Number of children who formed groups of each given size is shown in parenthe

Table 4b. Analysis of Reasons Given for Grouping the Objects in the Object Sorting Task by the Good and the Poor Achievers

Bases for Grouping	Number and Percent of Groups Formed			
	Good Achievers		Poor Achievers	
	N	%	N	%
By Use	69	58	79	60
By Physical Property	42	35	46	35
Multiple Reasons	5	4	4	3
Don't Know	3	3	3	2
Total	119[a]		132[a]	

[a]Groups of "1" were not included and therefore the total number of groups for the good achievers was decreased by 52 and for the poor achievers by 54.

Table 4c. Time Elements in the Object Sorting Task for the Good and the Poor Achievers

	Good Achievers (N = 10)	Poor Achievers (N = 10)	t
Time Required to Complete Sorting	(Mean) 10.2 minutes	7.1 minutes	1.16
	(S.D.) 8.04	3.03	
Reaction Time (Number of children who took longer than 1" before beginning)	3	1	

Table 5a. Quality of Stories Told by the Good and the Poor Achievers to the Four Pictures of the Story Telling Task

Level of Story	Number of Stories at Each Level	
	Good Achievers	Poor Achievers
Evaluative: (Telling a story elicited by the picture)	32 (9)[a]	35 (10)
Descriptive: (Merely describing the picture)	6 (4)	5 (4)
No Response to the Picture	2 (1)	0
Total Number of Stories	40	40

[a]The number of children who told stories at each level is shown in parentheses.

Table 5b. Goal and Achievement Orientation in the Stories of the Good and the Poor Achievers

	Good Achievers (N = 10)	Poor Achievers (N = 10)	t
Achievement Need: (As measured by McClelland's scoring)	Mean: 7.1[a]	2.5	2.14*
	S.D.: 5.99	3.40	

* Significant at less than the .05 level

[a]The higher the score, the greater the "need for achievement."

	Number of Stories	
Immediate vs. Future Goals: (when evident in story)		
Immediate ("Get candy for doing well")	14	22
Future ("Graduated and lived happily everafter")	15	13
Quality of Story Ending:		
Positive	25	22
Neutral	7	4
Negative	6	14

Note: The findings which differentiate the ppor group from the good group on the three items in this table (low achievement need, preponderance of immediate goals, negative story endings)result chiefly from the negative responses of the poor achieving boys. The sex differences noted here and in other items merit further study and should provide fruitful hypotheses.

Table 5c. Attitudes Toward Authority Expressed in the Stories of the Good and the Poor Achievers

		Number of Stories	
		Good Achievers	Poor Achievers
Attitude Toward Teacher: (When present in story) -	Positive	14	11
	Neutral	5	4
	Negative	7	8
Attitude Toward Parents: (When present in story) -	Positive	5	5
	Neutral	1	0
	Negative	5	10

Table 5d. Reward - Punishment Themes in the Stories of the Good and the Poor Achievers

		Number of Stories	
		Good Achievers	Poor Achievers
Frequency of Reward or Punishment: (When evident in stories) -	Reward	16	9
	Punishment	9	9

Table 5e. Emotions Expressed in the Stories of the Good and the Poor Achievers

	Number of Emotions	
	Good Achievers	Poor Achievers
Kind of Emotion Expressed:		
Angry, Mad	3	7
Sad, Lonesome, Unhappy	5	7
Happy, Glad, Proud	5	6

Table 6a: Mean Ratings of School and Non-School Concepts on the Semantic Differential Evaluative Scales for the Good and Poor Achievers (Standard deviations are shown in parentheses)

Concept	Good Achievers (N = 10)	Poor Achievers (N = 10)	t
Teacher	3.6[a] (3.10)	4.9 (1.87)	1.08
School	-0.7 (3.13)	1.1 (3.48)	1.15
Reading	3.7 (1.85)	5.3 (1.19)	2.16*
Arithmetic	3.8 (2.52)	4.4 (1.80)	0.58
Homework	3.2 (2.27)	2.8 (2.93)	0.32
Smart Child	4.6 (1.28)	4.8 (1.33)	0.32
Dumb Child	-1.9[b] (2.51)	-2.9[b] (3.01)	0.76
TOTAL SCHOOL CONCEPTS	2.9 (1.23)	3.8 (1.04)	1.67
Myself	2.9 (1.38)	3.6 (2.20)	0.81
Mother	3.5 (1.96)	5.3 (1.00)	2.46*
Father	4.1 (1.81)	5.6 (0.49)	2.42*
Best Friend	3.4 (1.80)	4.3 (1.49)	1.15
Television	4.8 (1.25)	5.2 (1.25)	0.68
Playing	3.2 (1.89)	4.7 (1.95)	1.67
TOTAL NON-SCHOOL CONCEPTS	3.7 (1.00)	4.8 (1.22)	2.24*

*Significant at less than the .05 level.

[a] The higher the mean rating, the more favorable the attitude expressed. On the six evaluative scales used (See Appendix C) the possible range of scores for each concept is from -6 to +6.

[b] Sign was reversed in computing "Total School" mean.

Table 6b: Mean Ratings of School and Non-School Concepts on the Semantic Differential Potency Scales for the Good and Poor Achievers (Standard deviations are shown in parentheses)

Concept	Good Achievers (N = 10)	Poor Achievers (N = 10)	t
Teacher	3.9[a] (3.56)	4.5 (2.01)	0.44
School	2.4 (2.24)	2.1 (3.71)	0.21
Reading	0.0 (3.29)	2.1 (4.25)	1.17
Arithmetic	1.5 (2.42)	3.0 (2.68)	1.25
Homework	0.6 (3.50)	2.1 (4.46)	0.79
Smart Child	2.7 (3.31)	2.7 (2.49)	0.00
Dumb Child	-3.3[b] (1.62)	-1.5[b] (3.85)	1.29
TOTAL SCHOOL CONCEPTS	2.1 (1.62)	2.6 (1.75)	0.63
Myself	2.4 (2.25)	3.0 (3.55)	0.43
Mother	3.3 (2.49)	4.8 (1.47)	1.56
Father	5.4 (1.80)	5.1 (1.37)	0.39
Best Friend	2.4 (1.80)	2.1 (3.20)	0.24
Television	3.9 (2.34)	1.5 (3.07)	1.88
Playing	2.1 (2.34)	2.7 (3.13)	0.46
TOTAL NON-SCHOOL CONCEPTS	3.2 (1.30)	3.1 (1.71)	0.15

[a]The higher the mean rating, the more favorable the attitude expressed. On the two potency scales used (see Appendix C) the possible range of scores for each concept is -2 to +2; however, the scores were multiplied by 3 to make them comparable to the evaluative scales.

[b] Sign was reversed in computing "Total School" mean.

Table 6c: Frequency of Choice of "Neutral" Position on the Three-Point Semantic Differential Scales

		Good Achievers (N = 10)	Poor Achievers (N = 10)	t
Number of Neutral Ratings	(Mean)	35.2[a]	16.7	2.68*
	(S. D.)	13.34	17.29	

*Significant at less than the .05 level.

[a]The total possible number of neutral positions which might have been checked by each child is 104.

Table 7a. Content Analysis of the Drawings on the Drawing Completion Task for the Good and the Poor Achievers

Content	Number of Drawings	
	Good Achievers	Poor Achievers
Representations:	58	57
Human and Human Object	18	15
Animal	9	4
Objects and Nature	31	38
Designs	38	41
Symbols	23	20
Geometric Forms	10	11
Numbers & Letters	13	9
Total ‡	119	118

‡The total possible number of drawings was 120; one child in the good group and two children in the poor group failed to complete all the drawings.

Table 7b. Quality of Drawings on the Drawing Completion Task for the Good and the Poor Achievers

Quality of Drawing		Good Achievers	Poor Achievers	
1. Symmetry of Drawing (Percent of Representational and Design Drawings Classified as Asymmetrical)		37.5%	34.7%	
2. Percent of Original‡ Responses		90.8%	85.6%	
3. Complexity Score ‡‡	(Mean)	25.7	22.1	(t=1.53)
	(S.D.)	9.54	6.76	
4. "Creativity" Score‡‡‡ (Percent of Representational and Design Drawings Judged Superior)		41.7%	35.7%	

‡A drawing was considered original if it occurred less than five times among the 20 children.

‡‡The complexity score was based on the number of lines used to complete the drawing. A drawing was given a score of "1" if no more than two lines were used; a score of "2", if three to five lines were used; a score of "3" where five or more lines were used. The highest possible score for all 12 drawings was 36.

‡‡‡The "creativity" score was based upon an evaluation by two judges as to the artistic ability ("superior", "average", or "inferior") each drawing evidenced. According to Barron (1) the drawings of "creative" persons are more asymmetrical, original, and complex.

Table 8a. Mean Height of Figures in "My Family" Drawing for the Good and the Poor Achievers

Family Figures		Good Achievers	Poor Achievers	t
Self	(Mean)	3.1" (9)[a]	1.7"(7)	1.63
	(S.D.)	1.99	1.31	
Mother	(Mean)	4.0" (9)	2.4"(5)	1.61
	(S.D.)	2.41	2.17	
Father	(Mean)	3.7" (8)	2.3"(5)	1.24
	(S.D.)	2.05	1.95	

[a]The number of children responding is shown in parentheses. The small number of cases in the poor group is due to the fact that the family members could not be distinguished when children did not circle "self" or label the other members of the family as instructed.

Table 8b. Activity Depicted in the Drawing of "A Child in School" for the Good and the Poor Achievers

Activity Depicted	Good Achievers	Poor Achievers
Work - Oriented (e.g., Child at desk or writing on blackboard)	8	5
Not Work - Oriented (e.g., playing)	2	4
Total	10	9[a]
$\chi^2 = 1.3$	df 1	n.s.

[a]One drawing missing.

Table 9a. Number of Words Used in Oral and Written Tasks by the Good and the Poor Achievers

(Standard deviations are shown in parentheses)

	Good Achievers (N = 10)	Poor Achievers (N = 10)	t
Average Number of Spoken Words Used in:			
Telling Stories to the Four Pictures in Story Telling Task	201.2 (98.04)	268.2 (210.09)	0.91
Responding to the Rorschach (Performance proper)	151.9 (118.05)	218.2 (140.10)	1.15
Naming Uses in Uses of Objects Task	44.7 (21.59)	65.9 (28.44)	1.88
Average Number of Written Words Used in Describing Picture of "A Child in School"	14.5 (12.68)	7.8 [a] (6.86)	1.47

[a]Mean based on nine cases.

Table 9b. Number of Good and Poor Achievers Who Followed Instructions on Free Drawing and Object Sorting Tasks

	Good Achievers	Poor Achievers
"My Family" Drawing		
Labelled figures as instructed	8	4
Did not follow instructions	2	5
$\chi^2 = 2.57$	df 1	n.s.
Object Sorting Task		
Re-sorted objects‡ into two groups only as instructed	7	3
Did not follow instructions	3	7
$\chi^2 = 3.20$	df 1	n.s.

‡After child had completed his sorting he was asked to put the objects into two groups only. Few children (3"good"children, 2"poor"children) were able to reorganize their original categories and form two groups using a higher level of generalization. More children in the good group, however, attempted to carry out the instructions.

Table 9c. Number of Good and Poor Achievers Who Exhibited Curiosity about the Unknown Object Included in Object Sorting Task

	Good Achievers	Poor Achievers
Asked question about unknown object	4	1
Did not ask about unknown object	6	9
$\chi^2 = 2.40$	df 1	n.s.

Table 9d. Level of Occupational Goal of the Good and Poor Achievers

Level of Education Required	Good Achievers	Poor Achievers
Occupations named required at least high school education	6	2 (Note: these were two girls who wanted to be nurses)
Occupations named required less than high school education	4	7
Total	10	9[a]
$\chi^2 = 2.77$	df 1	n.s.

[a] One boy missing.

Table 9e: Quality of Language Usage of the Good and the Poor Achievers

Quality‡		Good Achievers (N = 10)	Poor Achievers (N = 10)	t
Oral Usage	(Mean)	5.97	4.97	1.54
	(S.D.)	1.87	0.86	
Written Usage	(Mean)	6.10	(N = 9) 5.17	3.55**
	(S.D.)	0.57	0.56	

** Significant at less than the .01 level.

‡A quality score for oral usage was obtained from the story telling task and for written usage from the two short writing tasks. The oral and written language used were rated on a scale from 1 to 3 for each of three qualities: 1) grammatical construction, 2) level and accuracy of vocabulary and 3) narrative skill. A child's score could range from a low of 3 to a high of 9 in both oral and written usage.

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Appendix A: Objects Used in Object Sorting Task

1 glass jar

1 white lid for jar

1 green cardboard triangle 6"x5"x8"

1 blue cardboard triangle (smaller)

1 white 3"x5" index card

1 blue 3"x5" index card

1 red cardboard circle (about 1½" diameter)

1 piece of sandpaper-light tan-square

1 block of wood with nail partially hammered in

1 nail

1 screwdriver with yellow handle

1 blue plastic comb

1 piece of white chalk

1 piece of red crayon

1 pencil (red color - black lead)

2 small yellow birthday candles (2)

2 small yellow holders that fit candles (2)

1 small blue candle holder

1 medium size blue candle (doesn't fit holder)

1 large red candle

1 toy metal fork

1 yellow plastic knife

1 toy metal knife

1 regular size metal spoon

1 green plastic spoon

1 green plastic fork

1 lipstick (white case)

1 green padlock with keys

1 small gray rock

1 green lollipop

1 medicine dropper with brown rubber and plastic top

1 black bobby pin

1 white plastic doll's shoe

1 piece of gum eraser - light tan

1 pearl clip-on earring

1 blue bottle cap

1 cube of white sugar

1 flashlight bulb

1 ping pong ball

1 twist of yellow plastic coated wire

1 white button

1 square cake of white soap

Appendix B: Semantic Differential Scales

Name _____

_____

1. good | | bad

2. sad | | happy

3. big | | little

4. rich | | poor

5. mean | | nice

6. dirty | | clean

7. stupid | | smart

8. strong | | weak

Appendix C: Sample Items from Drawing Completion Test (Adapted from Kate Franck)

1

2

3

4